

CLAIMS

1. A polyester-fiber-containing woven or knit fabric comprising an air-jet interlacing spun yarn which comprises a polyester fiber having a titanium oxide content of less than 1.0% by weight, an anti-pilling property of the fabric of at least class 3 according to the A method in JIS L 1076, an ultraviolet shielding rate of at least 84%, and a visible ray transmittance of 40% or less.

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2. A process for producing a polyester-fiber-containing woven or knit fabric according to claim 1, using, as a constituent yarn of the woven or knit fabric, an air-jet interlacing spun yarn comprising a highly section-modified polyester fiber which has a titanium oxide content of less than 1.0% by weight, which has at least 3 projections continuously present on the fiber circumference in the fiber lengthwise direction, and which has a fiber cross section having a modified cross section degree (that is, a ratio of a circumscribed circle to an inscribed circle) of at least 1.8, or a hollow polyester fiber which has a titanium oxide content of less than 1.0% by weight and which has a hollow percentage of at least 8%, the number of naps having a length of at least 1 mm in the air-jet interlacing spun yarn being at least 30 and less than 350 per 10 meters, and the number of naps having a length of at least 3 mm therein being less than 15.

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3. A polyester fiber woven or knit fabric, comprising an air-jet interlacing spun yarn which comprises a polyester staple fiber graft-polymerization-processed with a hydrophilic compound, and has a nominal water content of at

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least 15%, and an anti-pilling property of at least class 3.

4. The polyester fiber woven or knit fabric according to
claim 3, wherein the dimensional change according to the F-
5 1 method in JIS L 1018 is from -8 to 0% for a woven fabric
and is from -3 to + 3% for a knit fabric.

5. A process for producing the polyester fiber woven or
knit fabric according to claim 3 or 4, comprising using an
10 air-jet interlacing spun yarn comprising a polyester staple
fiber graft-polymerization-processed with a hydrophilic
compound, the number of naps having a length of at least 1
mm and less than 3 mm in the air-jet interlacing spun yarn
being from 30 to 350 per 10 meters, and the number of naps
15 having a length of at least 3 mm therein being less than 15
per 10 meters.

6. A process for producing the polyester fiber woven or
knit fabric according to any one of claims 3 to 5, wherein
20 an air-jet interlacing polyester spun yarn or an air-jet
mixed-yarn of an air-jet interlacing spun yarn and multi-
filaments is used to produce the woven or knit fabric.

7. A process for producing a polyester fiber woven or
25 knit fabric according to any one of claims 3 to 6, wherein
the polyester staple fiber has a fineness (denier) of at
least 1.3 dtex, at leas 3 projections present in the
circumference of the fiber cross section thereof are
continuously present in the fiber lengthwise direction
30 thereof, and the modified cross section degree thereof is
at least 1.8.

8. A stretching bulky staple fiber woven or knit fabric comprising an air-jet interlacing spun yarn which comprises at least 10% by weight of a side by side crimped staple fiber having a fineness of 1.0 to 6.0 dtex, wherein said
5 fabric has an anti-pilling property of at least class 3.

9. The stretching bulky staple fiber woven or knit fabric according to claim 8, wherein the air-jet interlacing spun yarn comprises at least 10% by weight of a low-shrinkage
10 staple fiber having a boiling water shrinkage rate according to JIS L 1015 of 4% or less.

10. The stretching bulky staple fiber woven or knit fabric according to claim 8 or 9, wherein at least one of the
15 crimped staple fiber and the low-shrinkage staple fiber is a polyester staple fiber having a hollow cross section which has a hollow percentage of at least 5% or having a modified cross section which has at least one projection on the outer circumference of the fiber cross section thereof
20 and has a modified cross section degree of at least 1.8.

11. A process for producing a stretching bulky staple fiber woven or knit fabric, comprising using an air-jet interlacing spun yarn which comprises at least 10% by
25 weight of a side by side latently-crimpled staple fiber having a fineness of 0.8 to 4.0 dtex and satisfying the following relationship (1) between the number (X) of naps of the spun yarn and the number (Y) of filaments in a cross section of the spun yarn:

$$30 \quad 0.4Y \leq X \leq 2.5Y \quad (1)$$

wherein X is the number of naps having a length of at least 1 mm per 10 meters and Y is the number of filaments in a

cross section of the spun yarn, in which the number of the cross section filaments of the spun yarn is expressed by $5315 \times 1.11 / (\text{English cotton yarn count thereof} \times \text{dtex of monofilaments})$,

5 so as to prepare a woven or knit fabric, and
next shrinking the woven or knit fabric thermally.

12. The process for producing a stretching bulky staple fiber woven or knit fabric according to claim 11, wherein
10 the boiling water shrinkage rate according to JIS L 1015 of the latently-crimped staple fiber is at least 20%.

13. The process for producing a stretching bulky staple fiber woven or knit fabric according to claim 11 or 12,
15 wherein the air-jet interlacing spun yarn comprises 90 to 10% by weight of a low-shrinkage staple fiber having a boiling water shrinkage rate according to JIS L 1015 of 4% or less and 10 to 90% by weight of a latently-crimped staple fiber having a boiling water shrinkage rate
20 according to JIS L 1015 of at least 20%.

14. The process for producing a stretching bulky staple fiber woven or knit fabric according to any one of claims 11 to 13, wherein at least one of the latently-crimped
25 staple fiber and the low-shrinkage staple fiber is a polyester staple fiber or polyester staple fibers having a hollow cross section which has a hollow percentage of at least 8% or having a modified cross section which has at least one projection on the outer circumference of the
30 fiber cross section thereof and has a modified cross section degree of at least 1.8.

15. A bulky staple fiber woven or knit fabric comprising an air-jet interlacing spun yarn which comprises a low-shrinkage staple fiber having a boiling water shrinkage rate according to JIS L 1015 of 4% or less and a copolymer polyester staple fiber, the air-jet interlacing spun yarn comprising 10 to 60% by weight of the copolymer polyester staple fiber which is obtained by thermally shrinking the air-jet interlacing spun yarn, and said fabric has an anti-pilling property of at least class 3.

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16. The bulky staple fiber woven or knit fabric according to claim 15, wherein the copolymer polyester staple fiber is a high-shrinkage staple fiber having a hollow cross section which has a hollow percentage of at least 8% or a modified cross section which has at least one projection on the outer circumference of the fiber cross section thereof and has a modified cross section degree of at least 1.8, and a boiling water shrinkage rate according to JIS 1015 of at least 20%.

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17. The bulky staple fiber woven or knit fabric according to claim 15 or 16, wherein the low-shrinkage staple fiber is a polyester staple fiber having a hollow fiber cross sectional shape or a modified fiber cross sectional shape having a modified cross section degree of at least 1.8.

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18. The bulky staple fiber woven or knit fabric according to any one of claims 15 to 17, wherein the copolymer polyester staple fiber comprises isophthalic acid as a third component thereof.

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19. A process for producing a bulky staple fiber woven or

knit fabric, comprising using an air-jet interlacing spun yarn which comprises 90 to 40% by weight of a low-shrinkage staple fiber having a boiling water shrinkage rate according to JIS 1015 of 4% or less, and 10 to 60% by weight of a high-shrinkage staple fiber having a boiling water shrinkage rate according to JIS 1015 of at least 20% and satisfying the following relationship (1) between the number (K) of naps of the spun yarn and the number (A) of filaments in a cross section of the spun yarn:

10 $0.4A \leq K \leq 3A$ (1)

wherein K is the number of naps having a length of at least 1 mm per 10 meters, A is the number of filaments in a cross section of the spun yarn, in which the number of the cross section filaments of the spun yarn is $5315 \times 1.11 / (\text{English cotton yarn count} \times \text{dtex of monofilaments})$, so as to prepare a woven or knit fabric, and thermally shrinking the woven or knit fabric.

20. The process for producing a bulky staple fiber woven or knit fabric according to claim 19, wherein the high-shrinkage staple fiber is a copolymer polyester staple fiber having a hollow cross section which has a hollow percentage of at least 8% or a modified cross section which has at least one projection on the outer circumference of the fiber cross section thereof and has a modified cross section degree of at least 1.8, and a fineness of 1.0 to 4.0 dtex.

21. The process for producing a bulky staple fiber woven or knit fabric according to claim 19 or 20, wherein the high-shrinkage staple fiber is a copolymer polyester staple fiber having a maximum thermal stress of at least 0.08

cN/dtex at 60 to 160° C.